

## **Regional HIV/AIDS Epidemiologic Profile of Boston HSR, Massachusetts: 2012**

### **Recent changes to the presentation of Massachusetts HIV/AIDS surveillance data**

Effective January 1, 2011, the Massachusetts Department of Public Health (MDPH), Bureau of Infectious Diseases, HIV/AIDS fact sheets, epidemiologic reports and other HIV data presentations have been updated to remove all HIV/AIDS cases who were first diagnosed in another state before being reported in Massachusetts. As of January 1, 2012, this resulted in the removal of 2,924 HIV/AIDS cases, of which 808 have died and 2,116 were living. These persons living with HIV/AIDS may still continue to reside and receive care in the Commonwealth. The total number of persons living with HIV/AIDS, irrespective of location of diagnosis, is the basis for MDPH service planning. This change is partially a result of increased activities required by the Centers for Disease Control and Prevention (CDC) for de-duplication among states in an effort to identify cases that are counted multiple times in the National HIV/AIDS Surveillance System. The cases are assigned to the state that reports the earliest date of AIDS diagnosis if available. If the case has not progressed to AIDS, the case is assigned to the state with the earliest HIV diagnosis date. Please note that all previous HIV/AIDS fact sheets, data reports and presentations include cases that may have been first diagnosed in another state.

Also effective January 1, 2011, the MDPH HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to eliminate the presumed heterosexual exposure mode category for males; those cases have been reassigned to the no identified risk (NIR) exposure mode category. The presumed heterosexual exposure mode category was used with the intention of identifying HIV exposure mode for females when sex with males is the only reported risk factor, there is no evidence of current or past injection drug use (IDU), and behavioral risk and HIV status information about male sexual partners are unknown. Twenty-nine percent of females living with HIV/AIDS and 40% of recent female HIV diagnoses are reported in the presumed heterosexual exposure mode category. The application of the presumed heterosexual exposure mode category to males is overly inclusive in that female to male HIV transmission is biologically less probable, and there are alternate exposure modes that are possible for males, including sex with other men (MSM) or IDU. The CDC reports males diagnosed with HIV/AIDS who report sex with females as their only risk factor, without corresponding partner risk or HIV status information, in the NIR exposure mode category. This revision to report presumed heterosexual male HIV/AIDS cases as NIR will bring Massachusetts HIV/AIDS case reporting for males in alignment with CDC standards. The MDPH will maintain presumed heterosexual and heterosexual exposure mode categories for females.

**Table 1. Total number of people reported with HIV infection or AIDS<sup>1</sup> by mortality status on December 31, 2011: Boston HSR, Massachusetts<sup>2</sup>**

	<b>N</b>	<b>%</b>
People Living with HIV/AIDS	5,724	57%
People Reported with HIV or AIDS who are Deceased	4,315	43%
<b>Total Number of People Reported with HIV Infection or AIDS</b>	<b>10,039</b>	<b>100%</b>

<sup>1</sup> Does not include individuals diagnosed with HIV infection (non-AIDS) who died prior to January 1, 1999 or who were not in care on January 1, 1999

<sup>2</sup> Effective January 1, 2011, the Massachusetts Department of Public Health HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

Data Source: MDPH HIV/AIDS Surveillance Program, Data as of 1/1/12

**Table 2. Average annual rate of HIV infection diagnosis from 2008 to 2010 and HIV/AIDS prevalence rate on 12/31/11<sup>1</sup>: Boston HSR, Massachusetts<sup>2</sup>**

<b>Average annual HIV diagnosis rate from 2008–2010</b>	<b>Average rate per 100,000</b>	<b>Average annual number of HIV diagnoses</b>
Boston HSR, MA	24.3	190.0
Massachusetts Total	10.3	664.7

  

<b>HIV/AIDS prevalence rate on 12/31/11</b>	<b>Rate per 100,000</b>	<b>Number of people living with HIV/AIDS</b>
Boston HSR, MA	733.1	5,724
Massachusetts Total	277.5	18,170

<sup>1</sup> The denominators for rate calculations are from the MDPH Massachusetts Race Allocated Census 2010 Estimates (MRACE 2010), Massachusetts Department of Public Health, Bureau of Health Information, Statistics, Research, and Evaluation.

<sup>2</sup> Effective January 1, 2011, the Massachusetts Department of Public Health HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

Data Source: MDPH HIV/AIDS Surveillance Program, Data as of 1/1/12

**Table 3. People living with HIV/AIDS<sup>1</sup>, deaths among people reported with HIV/AIDS, and newly diagnosed HIV infections by year<sup>2</sup>: 2001–2010, Boston HSR, Massachusetts<sup>3</sup>**

<b>Year</b>	<b>HIV/AIDS Prevalence</b>	<b>Deaths among those with HIV/AIDS</b>	<b>Diagnosis of HIV Infection</b>
2001	4,135	119	305
2002	4,373	109	346
2003	4,560	106	293
2004	4,738	88	265
2005	4,933	84	275
2006	5,079	89	234
2007	5,200	76	197
2008	5,325	76	201
2009	5,445	61	181
2010	5,570	63	188

<sup>1</sup> Number of people living with HIV/AIDS on 12/31 of each year

<sup>2</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available ten-year period after the implementation of HIV infection reporting in 1999.

<sup>3</sup> Effective January 1, 2011, the Massachusetts Department of Public Health HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

Data source: MDPH HIV/AIDS Surveillance Program, Data as of 1/1/12

**Table 4. People diagnosed with HIV infection from 2008–2010<sup>1</sup> and people living with HIV/AIDS on December 31, 2011 by gender, place of birth, race/ethnicity, exposure mode, age at HIV infection diagnosis and current age: Boston HSR, Massachusetts<sup>2</sup>**

HIV Infection Diagnoses			PLWH/A	
Gender:	N	%	N	%
Male	434	76%	4,364	76%
Female	136	24%	1,360	24%
Place of Birth:	N	%	N	%
US	357	63%	3,906	68%
Puerto Rico/US Dependency <sup>3</sup>	34	6%	339	6%
Non-US	179	31%	1,479	26%
Race/Ethnicity:	N	%	N	%
White (non-Hispanic)	200	35%	2,321	41%
Black (non-Hispanic)	232	41%	2,213	39%
Hispanic/Latino	125	22%	1,086	19%
Asian/Pacific Islander	-- <sup>7</sup>	-- <sup>7</sup>	87	2%
Other/Undetermined <sup>4</sup>	-- <sup>7</sup>	-- <sup>7</sup>	17	<1%
Exposure Mode:	N	%	N	%
Male-to-male sex (MSM)	259	45%	2,714	47%
Injection Drug Use (IDU)	38	7%	788	14%
MSM/IDU	15	3%	190	3%
Heterosexual Sex	63	11%	722	13%
Other	7	1%	109	2%
Total Undetermined	188	33%	1,201	21%
• Presumed Heterosexual Sex <sup>5</sup>	61	11%	445	8%
• Undetermined <sup>6</sup>	127	22%	756	13%
Age:	N	%	N	%
	At Diagnosis		On December 31, 2011	
Under 13	5	1%	8	<1%
13 to 19	13	2%	40	1%
20 to 24	51	9%	81	1%
25 to 29	76	13%	164	3%
30 to 34	76	13%	291	5%
35 to 39	75	13%	416	7%
40 to 44	83	15%	724	13%
45 to 49	74	13%	1,130	20%
50 to 54	58	10%	1,183	21%
55 to 59	33	6%	856	15%
60+	26	5%	831	15%
<b>Total</b>	<b>570</b>	<b>100%</b>	<b>5,724</b>	<b>100%</b>

<sup>1</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available three-year period after the implementation of HIV infection reporting in 1999.

<sup>2</sup> Effective January 1, 2011, the Massachusetts Department of Public Health HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

<sup>3</sup> Ninety-eight percent of people diagnosed with HIV infection from 2008–2010 who were born in a US dependency were born in Puerto Rico, 1% were born in the US Virgin Islands, 1% were born in Guam and 1% were born in an unknown dependency.

<sup>4</sup> Includes American Indian/Alaska Native, other and unspecified race/ethnicity.

<sup>5</sup> Includes female sex with male of unknown HIV status or risk. This category is limited to females.

<sup>6</sup> Includes male sex with female of unknown HIV status or risk, those still being followed up for risk information, those who have died with no determined risk, and those lost to follow-up.

<sup>7</sup> Values less than five are suppressed for populations less than 50,000 or for populations of unknown size. Additional values may be suppressed to prevent back calculation.

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 1/1/12

**Table 5. People living with HIV/AIDS on December 31, 2011 by gender and race/ethnicity: Boston HSR, Massachusetts<sup>1</sup>**

Race/Ethnicity:	Male		Female	
	N	%	N	%
White (non-Hispanic)	2,139	49%	182	13%
Black (non-Hispanic)	1,318	30%	895	66%
Hispanic/Latino	821	19%	265	19%
Asian/Pacific Islander	73	2%	-- <sup>3</sup>	-- <sup>3</sup>
Other/Undetermined <sup>2</sup>	13	<1%	-- <sup>3</sup>	-- <sup>3</sup>
<b>Total</b>	<b>4,364</b>	<b>100%</b>	<b>1,360</b>	<b>100%</b>

<sup>1</sup> Effective January 1, 2011, the Massachusetts Department of Public Health HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

<sup>2</sup> Includes American Indian/Alaska Native, other and unspecified race/ethnicity.

<sup>3</sup> Values less than five are suppressed for populations less than 50,000 or for populations of unknown size. Additional values may be suppressed to prevent back calculation

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 1/1/12

**Table 6. People living with HIV/AIDS on December 31, 2011 by gender and exposure mode: Boston HSR, Massachusetts<sup>1</sup>**

Exposure Mode:	Male		Female	
	N	%	N	%
Male-to-male sex (MSM)	2,714	62%	N/A	N/A
Injection drug use (IDU)	517	12%	271	20%
MSM/IDU	190	4%	N/A	N/A
Heterosexual sex	231	5%	491	36%
Other	56	1%	53	4%
Total Undetermined	656	15%	545	40%
• Presumed heterosexual sex <sup>2</sup>	N/A	N/A	445	33%
• Undetermined <sup>3</sup>	656	15%	100	7%
<b>Total</b>	<b>4,364</b>	<b>100%</b>	<b>1,360</b>	<b>100%</b>

<sup>1</sup> Effective January 1, 2011, the Massachusetts Department of Public Health HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

<sup>2</sup> Includes female sex with male of unknown HIV status or risk. This category is limited to females.

<sup>3</sup> Includes male sex with female of unknown HIV status or risk, those still being followed up for risk information, those who have died with no determined risk, and those lost to follow-up.

<sup>4</sup> Values less than five are suppressed for populations less than 50,000 or for populations of unknown size. Additional values may be suppressed to prevent back calculation.

N/A=Not Applicable

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 1/1/12

**Table 7. People diagnosed with HIV infection by gender and year of diagnosis: Boston HSR, Massachusetts<sup>1</sup>, 2001–2010<sup>2</sup>**

	Male		Female		Total
	N	%	N	%	
2001	227	74%	78	26%	305
2002	250	72%	96	28%	346
2003	205	70%	88	30%	293
2004	202	76%	63	24%	265
2005	214	78%	61	22%	275
2006	187	80%	47	20%	234
2007	158	80%	39	20%	197
2008	162	81%	39	19%	201
2009	142	78%	39	22%	181
2010	130	69%	58	31%	188

<sup>1</sup> Effective January 1, 2011, the Massachusetts Department of Public Health HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

<sup>2</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available ten-year period after the implementation of HIV infection reporting in 1999.

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 1/1/12

**Table 8. People diagnosed with HIV infection by race/ethnicity and year of diagnosis: Boston HSR, Massachusetts<sup>1</sup>, 2001–2010<sup>2</sup>**

	White Non-Hispanic		Black Non-Hispanic		Hispanic/Latino		Total <sup>3</sup>
	N	%	N	%	N	%	N
2001	112	37%	130	43%	54	18%	305
2002	118	34%	157	45%	66	19%	346
2003	102	35%	124	42%	65	22%	293
2004	93	35%	116	44%	53	20%	265
2005	99	36%	102	37%	70	25%	275
2006	95	41%	86	37%	50	21%	234
2007	78	40%	76	39%	36	18%	197
2008	80	40%	79	39%	38	19%	201
2009	60	33%	80	44%	40	22%	181
2010	60	32%	73	39%	47	25%	188

<sup>1</sup> Effective January 1, 2011, the Massachusetts Department of Public Health HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

<sup>2</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available ten-year period after the implementation of HIV infection reporting in 1999.

<sup>3</sup> Totals include Asian/Pacific Islander, American Indian/Alaskan Native individuals and those of other or undetermined race/ethnicity

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 1/1/12

**Table 9. People diagnosed with HIV infection by place of birth and year of diagnosis: Boston HSR, Massachusetts<sup>1</sup>, 2001–2010<sup>2</sup>**

	US		Puerto Rico/ US Dependency <sup>3</sup>		Non-US		Total
	N	%	N	%	N	%	N
2001	196	64%	9	3%	100	33%	<b>305</b>
2002	210	61%	14	4%	122	35%	<b>346</b>
2003	183	62%	19	6%	91	31%	<b>293</b>
2004	172	65%	9	3%	84	32%	<b>265</b>
2005	178	65%	17	6%	80	29%	<b>275</b>
2006	147	63%	11	5%	76	32%	<b>234</b>
2007	130	66%	9	5%	58	29%	<b>197</b>
2008	132	66%	11	5%	58	29%	<b>201</b>
2009	116	64%	13	7%	52	29%	<b>181</b>
2010	109	58%	10	5%	69	37%	<b>188</b>

<sup>1</sup> Effective January 1, 2011, the Massachusetts Department of Public Health HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

<sup>2</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available ten-year period after the implementation of HIV infection reporting in 1999.

<sup>3</sup> Ninety-eight percent of all people diagnosed with HIV infection in MA who were born in a US dependency were born in Puerto Rico, 1% were born in the US Virgin Islands, <1% were born in American Samoa, <1% were born in Guam and 1% were born in an unknown dependency.

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 1/1/12

**Table 10. People diagnosed with HIV infection by exposure mode and year of diagnosis: Boston HSR, Massachusetts<sup>1</sup>, 2001–2010<sup>2</sup>**

	MSM		IDU		MSM/ IDU		HTSX		Other		Pres. HTSX <sup>3</sup>		Undeter- mined <sup>4</sup>		Total
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N
2001	127	42%	38	12%	-- <sup>5</sup>	-- <sup>5</sup>	48	16%	-- <sup>5</sup>	-- <sup>5</sup>	28	9%	55	18%	<b>305</b>
2002	138	40%	44	13%	-- <sup>5</sup>	-- <sup>5</sup>	66	19%	-- <sup>5</sup>	-- <sup>5</sup>	25	7%	60	17%	<b>346</b>
2003	119	41%	31	11%	-- <sup>5</sup>	-- <sup>5</sup>	42	14%	-- <sup>5</sup>	-- <sup>5</sup>	36	12%	52	18%	<b>293</b>
2004	120	45%	26	10%	-- <sup>5</sup>	-- <sup>5</sup>	27	10%	-- <sup>5</sup>	-- <sup>5</sup>	34	13%	50	19%	<b>265</b>
2005	144	52%	21	8%	-- <sup>5</sup>	-- <sup>5</sup>	32	12%	-- <sup>5</sup>	-- <sup>5</sup>	23	8%	43	16%	<b>275</b>
2006	121	52%	16	7%	-- <sup>5</sup>	-- <sup>5</sup>	28	12%	-- <sup>5</sup>	-- <sup>5</sup>	21	9%	37	16%	<b>234</b>
2007	97	49%	20	10%	-- <sup>5</sup>	-- <sup>5</sup>	15	8%	-- <sup>5</sup>	-- <sup>5</sup>	13	7%	41	21%	<b>197</b>
2008	98	49%	13	6%	-- <sup>5</sup>	-- <sup>5</sup>	21	10%	-- <sup>5</sup>	-- <sup>5</sup>	16	8%	41	20%	<b>201</b>
2009	87	48%	11	6%	-- <sup>5</sup>	-- <sup>5</sup>	21	12%	-- <sup>5</sup>	-- <sup>5</sup>	17	9%	41	23%	<b>181</b>
2010	74	39%	14	7%	-- <sup>5</sup>	-- <sup>5</sup>	21	11%	-- <sup>5</sup>	-- <sup>5</sup>	28	15%	45	24%	<b>188</b>

<sup>1</sup> Effective January 1, 2011, the Massachusetts Department of Public Health HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

<sup>2</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available ten-year period after the implementation of HIV infection reporting in 1999.

<sup>3</sup> Includes female sex with male of unknown HIV status or risk. This category is limited to females.

<sup>4</sup> Includes male sex with female of unknown HIV status or risk, those still being followed up for risk information, those who have died with no determined risk, and those lost to follow-up.

<sup>5</sup> Values less than five are suppressed for populations less than 50,000 or for populations of unknown size. Additional values may be suppressed to prevent back calculation.

MSM = Male-to-Male Sex; IDU = Injection Drug Use; MSM/IDU = Male-to-Male Sex and Injection Drug Use; HTSX = Heterosexual Sex; Pres. HTSX = Presumed Heterosexual Sex

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 1/1/12



**Table 11. People diagnosed with HIV infection and AIDS within two months and all people diagnosed with HIV infection by year of diagnosis: Boston HSR, Massachusetts<sup>1</sup>, 2001–2010<sup>2</sup>**

	HIV and AIDS diagnosed within two months	All HIV infection diagnoses	% diagnosed with HIV and AIDS within two months
Year:	N	N	%
2001	105	305	34%
2002	110	346	32%
2003	95	293	32%
2004	81	265	31%
2005	84	275	31%
2006	82	234	35%
2007	63	197	32%
2008	48	201	24%
2009	52	181	29%
2010	52	188	28%

<sup>1</sup> Effective January 1, 2011, the Massachusetts Department of Public Health HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

<sup>2</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available ten-year period after the implementation of HIV infection reporting in 1999.  
Data Source: MDPH HIV/AIDS Surveillance Program, Data as of 1/1/12

**Table 12. People diagnosed with HIV infection and AIDS within two months and all people diagnosed with HIV infection by gender, race/ethnicity, and place of birth: Boston HSR, Massachusetts,<sup>1</sup> 2008–2010<sup>2</sup>**

	HIV and AIDS diagnosed within two months	All HIV infection diagnoses	% diagnosed with HIV and AIDS within two months
<b>Gender:</b>	<b>N</b>	<b>N</b>	<b>%</b>
Male	117	434	27%
Female	35	136	26%
<b>Race/Ethnicity:</b>	<b>N</b>	<b>N</b>	<b>%</b>
White (non-Hispanic)	45	200	23%
Black (non-Hispanic)	74	232	32%
Hispanic/Latino	31	125	25%
Asian/Pacific Islander	-- <sup>5</sup>	-- <sup>5</sup>	-- <sup>5</sup>
Other/Undetermined <sup>3</sup>	-- <sup>5</sup>	-- <sup>5</sup>	-- <sup>5</sup>
<b>Place of Birth:</b>	<b>N</b>	<b>N</b>	<b>%</b>
US	87	357	24%
Puerto Rico/US Dependencies <sup>4</sup>	5	34	15%
Non-US	60	179	34%
<b>Total</b>	<b>152</b>	<b>570</b>	<b>27%</b>

<sup>1</sup> Effective January 1, 2011, the Massachusetts Department of Public Health HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

<sup>2</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available three-year period after the implementation of HIV infection reporting in 1999.

<sup>3</sup> Includes American Indian/Alaska Native, other and unspecified race/ethnicity.

<sup>4</sup> Ninety-eight percent of people diagnosed with HIV infection from 2008–2010 who were born in a US dependency were born in Puerto Rico, 1% were born in the US Virgin Islands, 1% were born in Guam and 1% were born in an unknown dependency.

<sup>5</sup> Values less than five are suppressed for populations less than 50,000 or for populations of unknown size. Additional values may be suppressed to prevent back calculation.

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 1/1/12